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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,734	08/30/2001	Toshiaki Tarui	HITA.0101	6492

7590 11/12/2004

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EXAMINER

ALI, SYED J

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,734

Applicant(s)

TARUI ET AL.

Examiner

Syed J Ali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date August 30, 2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-15 are pending in this application.

Claim Objections

2. **Claims 1, 5, 9, 11, 13 are objected to because of the following informalities:**
 - a. In line 3 of claim 1, "capable of divided" should read "capable of being divided".
 - b. In line 1 of claim 5, "claim 2;" should read "claim 2,".
 - c. In line 1 of claim 9, "claim 7;" should read "claim 7,".
 - d. In line 2 of claim 9, "transmit monitored" should read "transmit a monitored".
 - e. In line 1 of claim 11, "claim 1;" should read "claim 1,".
 - f. In line 2 of claim 13, "change input/output" should read "change the input/output".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

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5. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-5, 10-11, and 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kleinsorge et al. (USPN 6,226,734) (hereinafter Kleinsorge).**

8. As per claim 1, Kleinsorge teaches the invention as claimed, including a computer comprising one or more CPUs, a main memory and one or more input/output means, said computer being capable of being divided into a plurality of partitions (col. 6 lines 14-18; col. 6 line 65 - col. 7 line 19);

wherein a means to control allocation of the input/output means for the partitions is provided (col. 2 line 54 - col. 3 line 6; col. 8 lines 4-10; col. 8 lines 25-28).

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9. As per claim 2, Kleinsorge teaches the invention as claimed, including a computer as claimed in claim 1, wherein a means to monitor input/output performance of said partitions corresponding to the partitions is provided (col. 4 line 59 - col. 5 line 3; col. 27 lines 36-51; col. 27 line 65 - col. 28 line 21).

10. As per claim 3, Kleinsorge teaches the invention as claimed, including a computer as claimed in claim 1, wherein a means for an operator to instruct input/output allocation for each partition is provided (col. 2 line 54 - col. 3 line 6; col. 8 lines 4-10; col. 8 lines 25-28).

11. As per claim 4, Kleinsorge teaches the invention as claimed, including a computer as claimed in claim 1, wherein a means to book input/output allocation for each partition is provided (col. 23 lines 24-36; col. 23 line 53 - col. 24 line 12).

12. As per claim 5, Kleinsorge teaches the invention as claimed, including a computer as claimed in claim 2, wherein said computer is provided with a means to compare input/output capacity of each partition with change conditions of prescribed input/output ratio (col. 12 lines 5-37), and a means to change input/output allocation for said partitions without mediation of an operator when said change conditions of the input/output allocation are fulfilled (col. 2 line 54 - col. 3 line 6; col. 8 lines 4-10; col. 8 lines 25-28).

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13. As per claim 10, Kleinsorge teaches the invention as claimed, including a computer as claimed in claim 1, wherein said computer is provided with a means to change input/output allocation of each partition in proportion to CPU allocation for said partition (col. 2 line 54 - col. 3 line 6; col. 8 lines 4-10; col. 8 lines 25-28).

14. As per claim 11, Kleinsorge teaches the invention as claimed, including a computer as claimed in claim 1, wherein input/output allocation for a partition is changed according to a means to monitor performance of each partition, said monitored result, and conditions prescribed by a user (col. 4 line 59 - col. 5 line 3; col. 27 lines 36-51; col. 27 line 65 - col. 28 line 21).

15. As per claim 12, Kleinsorge teaches the invention as claimed, including a computer as claimed in claim 1, wherein said computer is provided with:

a means to interrupt communication conducted by a first partition after data of prescribed size has been transmitted (col. 30 lines 39-44);

a means to change over to communication that another partition requests after said interruption (col. 30 line 45 - col. 31 line 4), and

a means to resume the communication of the first partition after the data of prescribed size has been sent through the communication of said another partition (col. 31 line 54 - col. 32 line 7).

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16. As per claim 13, Kleinsorge teaches the invention as claimed, including a computer as claimed in claim 1, wherein a means to dynamically change input/output adapter to which each partition can gain access (col. 2 line 54 - col. 3 line 6; col. 8 lines 4-10; col. 8 lines 25-28).

17. As per claim 14, Kleinsorge teaches the invention as claimed, including an input/output means for a computer comprising one or more CPUs, a main memory and one or more input/output means (col. 6 lines 14-18);

said means being the input/output means for the computer capable of being divided into a plurality of partitions (col. 6 lines 14-18), and conducting input/output processing of each partition according to the ratio specified externally (col. 12 lines 5-37).

18. As per claim 15, Kleinsorge teaches the invention as claimed, including an input/output means for a computer comprising one or more CPUs, a main memory and one or more input/output means (col. 6 lines 14-18),

said means being the input/output means for the computer capable of being divided into a plurality of partitions (col. 6 lines 14-18);

wherein said input/output means has a partition number with which said input/output means can be accessed (col. 23 lines 24-36; col. 23 line 53 - col. 24 line 12), a setting register holding a plurality of sets of page addresses used by said partition to gain access to said input/output means (col. 23 lines 24-36; col. 23 line 53 - col. 24 line 12), and a means for a partition-control program to dynamically set said setting register (col. 4 line 59 - col. 5 line 3; col. 27 lines 36-51; col. 27 line 65 - col. 28 line 21).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinsorge in view of Bauman et al. (USPN 6,279,098) (hereinafter Bauman).**

21. As per claim 6, Bauman teaches the invention as claimed, including a computer as claimed in claim 5, wherein said computer is provided with a means to record time used for having increased input/output allocation for partitions (col. 1 line 51-61) and a means to give additional charge to the user of said partition according to said record (col. 1 line 51-61).

22. It would have been obvious to one of ordinary skill in the art to combine Kleinsorge and Bauman since the redistribution of processing resources allows larger tasks to take on a larger portion of a system's resources while taking away excess resources from smaller resources. Thus, the system can make the most efficient use of its limited resources to improve performance as much as possible.

23. **Claims 7-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinsorge in view of McColl et al. (USPN) (hereinafter McColl).**

24. As per claim 7, McColl teaches the invention as claimed, including a computer as claimed in claim 2, wherein said computer system is provided with:

a means to compare processing capability of each partition with prescribed lower limit capability of the partition according to SLA (Service Level Agreement) (col. 19 lines 13-56),

a means to determine, when said capability is less than the lower limit capability or likely to be so, whether there exists a CPU bound or an input/output bound according to CPU performance and input/output performance of the partition (col. 19 lines 13-56), and

a means to increase input/output allocation to said partition when above case is determined to be the input/output bound are there is surplus in input/output performance of other partitions (col. 19 lines 13-56).

25. It would have been obvious to one of ordinary skill in the art to combine Kleinsorge and McColl since the provision of service levels allows simple reassignment of resources in a continuous manner. This allows the system to monitor performance and make adjustments on the fly or to allow a system administrator to make the adjustments.

26. As per claim 8, McColl teaches the invention as claimed, including a computer as claimed in claim 7, wherein said computer is provided with a means to record, when the case is the input/output bound and no surplus of input/output performance is found in other partitions, that SLA has not been maintained, and a means to reduce the charge given to said partition user according to said record (col. 19 lines 13-56).

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27. As per claim 9, McColl teaches the invention as claimed, including a computer as claimed in claim 7, wherein said computer is provided with a means to transmit a monitored result of the input/output performance to an external second computer, and a means to change input/output allocation according to SLA determined in said second computer and change request for input/output allocation (col. 19 lines 13-56).

Conclusion

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J Ali whose telephone number is (571) 272-3769. The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Syed Ali
November 1, 2004


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